

**REMARKS/ARGUMENTS**

Reconsideration of this application and entry of the foregoing amendments are respectfully requested.

Claim 1 has been revised to additionally define the invention and to recite specific meso substituted porphines, support being found in Figure 1G (and in Application No. 09/184,982, incorporated by reference at page 8). Claims 2-4 have been cancelled without prejudice. Claim 5 has been amended to properly depend from claim 1 as now presented. Claim 6 has been cancelled without prejudice. Claim 7 has been amended to depend from claim 5. Claim 8 has been cancelled without prejudice. Claims 9 and 10 have been amended to additionally define the invention and so as to be in independent form. That claims have been revised/cancelled should not be taken as an indication that Applicants agree with any view expressed by the Examiner. Rather, the revisions have been made merely to advance prosecution and Applicants reserve the right to pursue any deleted subject matter in a continuation application. New claims 29-32 find support throughout the disclosure.

Claims 1-10 stand provisionally rejected as allegedly representing obviousness-type double patenting over claims 16-20 of Application No. 09/880,125, in view of Kobayashi et al. The rejection is traversed.

At the outset, attention is directed to the fact that claims 16-20 are no longer pending in Application No. 09/880,125. Claims 1-27 were cancelled in an Amendment filed April 13, 2004. Claims 28-59 are pending, a copy of those claims is attached.

The claims of the subject application are drawn to a method of treating a cancer. While claims 16-20 are no longer pending in Application No. 09/880,125, claim 36 of Application No. 09/880,125, like original claim 16, is drawn to a method of protecting cells from oxidant-

induced toxicity. The Examiner has provided no explanation how the cancer treatment method claimed in this application is in any way suggested by the toxicity protection method of Application No. 09/880,125. Clarification is requested.

Like original claim 19 of Application No. 09/880,125 (now cancelled), pending claim 42 of Application No. 09/880,125 is drawn to a method of treating a pathological condition resulting from oxidant-induced toxicity. The rejection appears based on the Examiner's belief that cancer results from oxidant-induced toxicity. However, the Examiner provides no basis for such an assertion and same is requested.

The Examiner acknowledges that "'125 does not expressly teach for treating cancer, or employment of the particular compound, 10113." The Examiner looks to the teachings of Kobayashi et al to provide the missing teachings.

Kobayashi et al does not teach that treatment of a cancer can be effected by protecting cells from oxidant-induced toxicity. Kobayashi et al also does not teach that cancer is a pathological condition resulting from oxidant-induced toxicity. Kobayashi et al merely teaches that cancer patients suffer from oxidative stress and reports the results of studies designed to "clarify the mode of action" of a protein-bound polysaccharide of *Coriolus versicolor* QUEL (PS-K) that expresses SOD mimicking activity.

Respectfully, It appears that the rejection of the instant claims as representing obviousness-type double patenting results from a misunderstanding on the Examiner's part as to the subject matter claimed in Application No. 09/880,125. The Examiner is requested to provide the requisite clear evidence to establish why the invention of the present claims would have been obvious, or withdraw the rejection.

Claims 1-10 stand rejected under 35 USC 103 as allegedly being obvious over Application No. 09/880,125 in view of Kobayashi et al. The rejection is traversed.

At the outset, the Examiner's attention is directed to the fact that WO 99/23097 (of record), which published May 14, 1999, is equivalent to Application No. 09/880,125.

The Examiner is reminded that the instant claims are drawn to a method of treating a cancer (not to a method of relieving oxidative stress in a cancer patient). Such a method is clearly not taught by Application No. 09/880,125 (or WO 99/23097) and the Examiner acknowledges this to be the case.

Kobayashi et al's teachings relate to a protein-bound lipopolysaccharide the structure of which bears no similarity to that of the substituted porphines of the present claims. Furthermore, the teachings of Kobayashi et al indicate that PS-K differs functionally from the instant substituted porphines (see comments below offered in connection with the rejection based on Kobayashi et al and Bloodsworth et al). Kobayashi et al, therefore, could not have suggested anything of the therapeutic activity of the compounds of the instant claims.

It is only with hindsight that one would have combined the teachings of Application No. 09/880,125 with those of Kobayashi et al. That this is the case is underscored by the fact that, in combining the references, the Examiner has elected to ignore those portions of Kobayashi et al that clearly indicate that PS-K is not suitable for use for periods exceeding one week.

Reconsideration is requested.

The Examiner comments that claims 1-10 are directed to an invention not patentably distinct from claims 16-20 of Application No. 09/880,125. Respectfully, the Examiner is mistaken.

The instant claims are drawn to a method of treating a cancer. As pointed out above, claims 16-20 are no longer pending in Application No. 09/880,125, however, pending claim 36 of Application No. 09/880,125, like original claim 16, is drawn to a method of protecting cells from oxidant-induced toxicity. Clearly, protecting cells from oxidant-induced toxicity is in no way equivalent to treating a cancer. Like original claim 19 of Application No. 09/880,125 (now cancelled), pending claim 42 of Application No. 09/880,125 is drawn to a method of treating a pathological condition resulting from oxidant-induced toxicity. The Examiner provides no basis for her apparent contention that cancer results from oxidant induced toxicity. (Kobayashi et al certainly includes no such teaching. Kobayashi et al merely teaches that cancer patients suffer from oxidative stress.) Given that the inventions are not conflicting, an interference is clearly not appropriate and the Examiner is urged to reconsider her position in this regard.

Claims 1-10 stand rejected under 35 USC 103 as allegedly being obvious over Kobayashi et al in view of Bloodsworth et al. The rejection is traversed.

Bloodsworth et al teaches that manganese porphyrin complexes serve to catalytically scavenge superoxide, peroxynitrite and hydrogen peroxide. The article examines the reactions of MnTE-2-PyP<sup>5+</sup> with lipids and lipid hydroperoxides. Bloodsworth et al state that MnTE-2-PyP<sup>5+</sup> may serve as an effective scavenger of reactive lipid intermediates in tissues. Bloodsworth et al says nothing of treating a cancer.

As pointed out above, the compound of Kobayashi et al, PS-K, differs fundamentally from the substituted porphines of the instant claims. Kobayashi et al specifically states that prolonged treatment of PS-K increased plasma lipid peroxide and that patients treated with PS-K showed "general clinical failure". Kobayashi et al goes on to state that due to excess SOD activity, "the over production of H<sub>2</sub>O<sub>2</sub> from O<sub>2</sub> may lead to inadequate levels of catalase,

peroxidase and glutathione peroxidase with subsequent production of hydroxyl radicals from  $H_2O_2$  through Fenton reaction".

Given the clear disparity between the teachings of Kobayashi et al relating to PK-S and Bloodsworth et al relating to MnTE-2-PyP<sup>5+</sup>, absolutely no basis is seen for combining the references as the Examiner has done. Nothing in Kobayashi et al relating to PS-K treatment would have suggested that the structurally and functionally distinct compound of Bloodsworth et al could be effectively used to treat a cancer.

Even if it had been obvious to try the compound of Bloodsworth et al in the context of treating a cancer (which it would not have been), the teachings of the citations clearly fail to provide any basis for a reasonable expectation of success.

Reconsideration is requested.

Claims 1-10 stand rejected under 35 USC 103 as allegedly being obvious over Wheelhouse et al. The rejection is traversed.

Wheelhouse et al discloses a method of treating cancer using telomerase inhibitors. Table 5 of Wheelhouse "provides further evidence of the importance of stacking interactions to the process by which telomerase is being inhibited". It will be noted that at 25  $\mu$ M, 0% inhibition was seen with compound B8 (10113).

Wheelhouse et al does not teach nor would it have suggested the compounds of present claim 10, as telomerase inhibitors or otherwise.

In view of the failure of Wheelhouse to teach or suggest efficacy of the compounds recited in the instant claims in a method of treating a cancer, reconsideration is requested.

This application is submitted to be in condition for allowance and a Notice to that effect is requested.

CRAPO et al  
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Respectfully submitted,

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